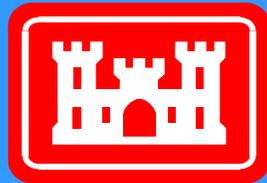


PROJECT OVERVIEW GEOTECHNICAL/GEOLOGICAL

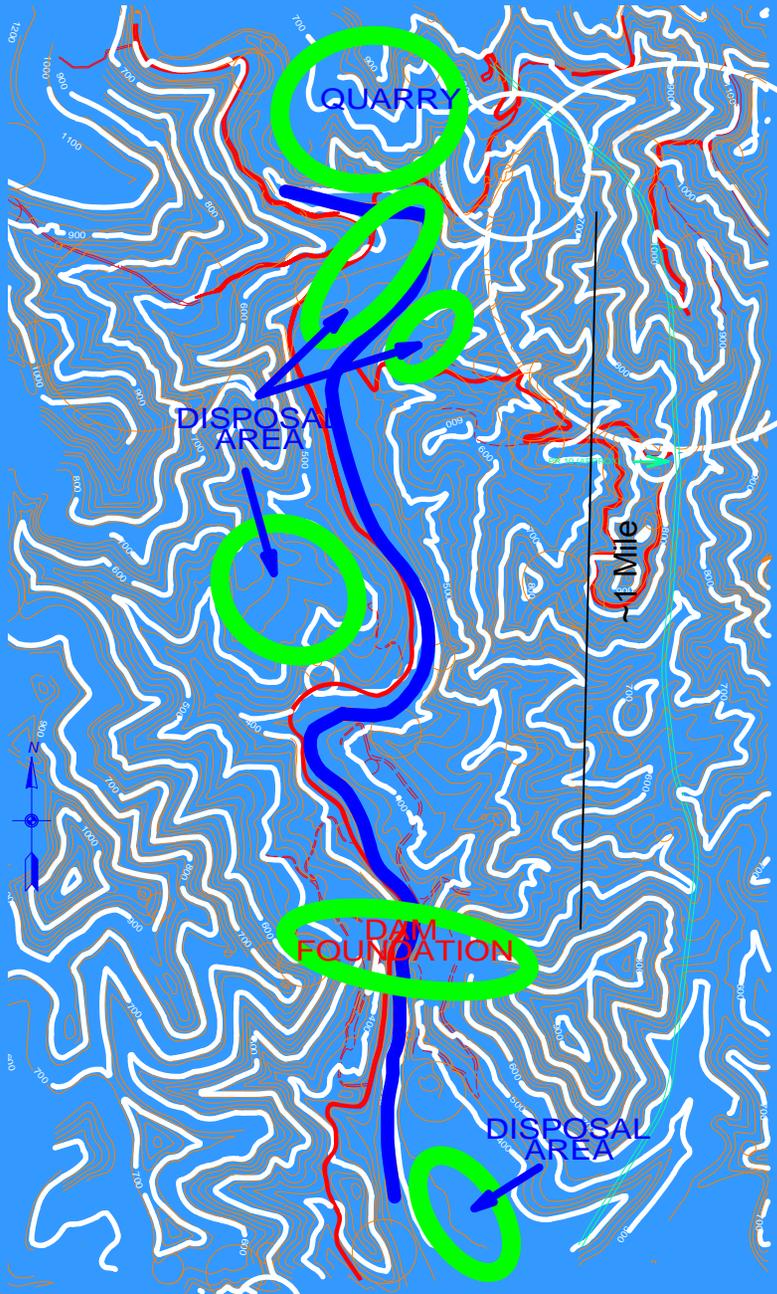
Steve Myers, Geologist, Jacksonville District



PROJECT OVERVIEW

GEOTECHNICAL/GEOLOGICAL

- Dam Foundation
- Quarry
- Disposal Areas





DAM FOUNDATION AND EXCAVATION TASKS

Earthwork – Excavation, Controlled and Production Blasting

Foundation Treatment

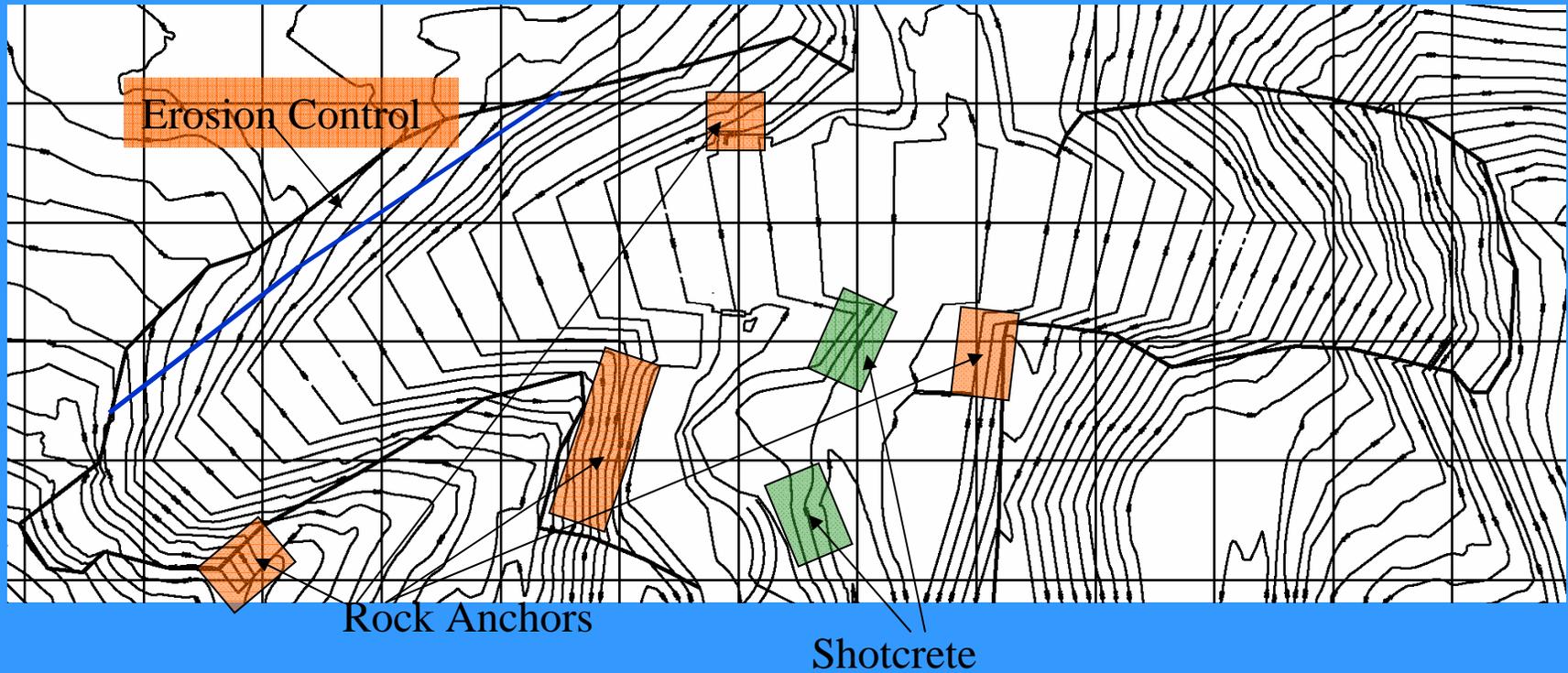
Slope Stability - Rock Anchors, Anchored Reinforcing Mat, Wire Mesh

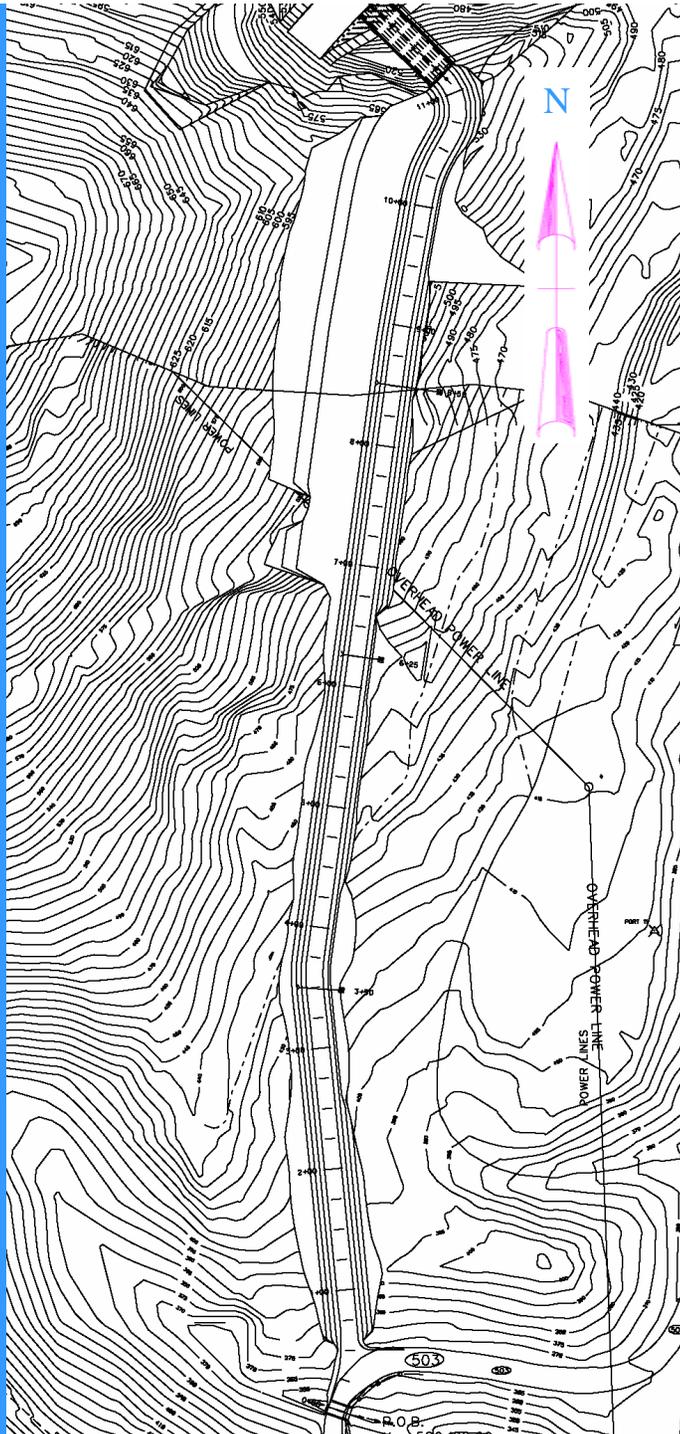
Grouting – Consolidation, Curtain, Contact

FOUNDATION EXCAVATION AND BENCHING



FOUNDATION EXCAVATION SURFACE

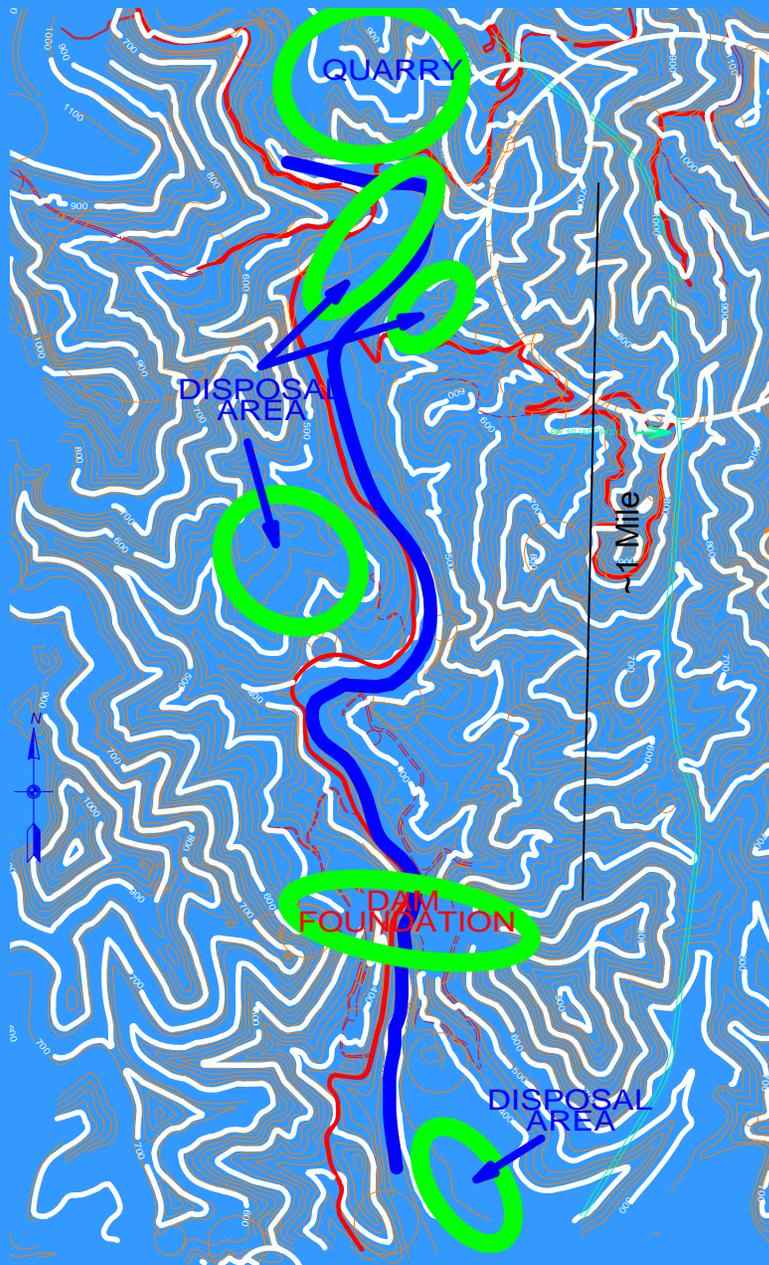




CREST ACCESS ROAD

- Approximately $\frac{1}{4}$ mile long
- Excavation
- Road construction

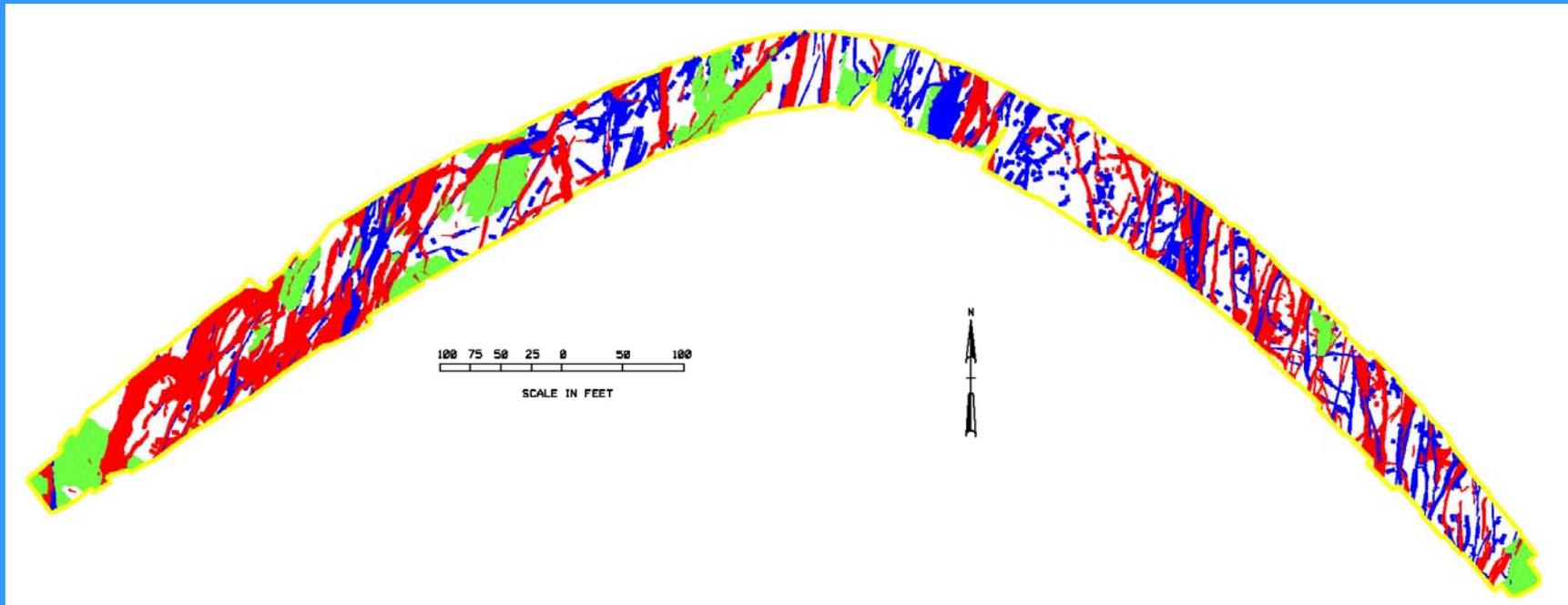
FOUNDATION EXCAVATION

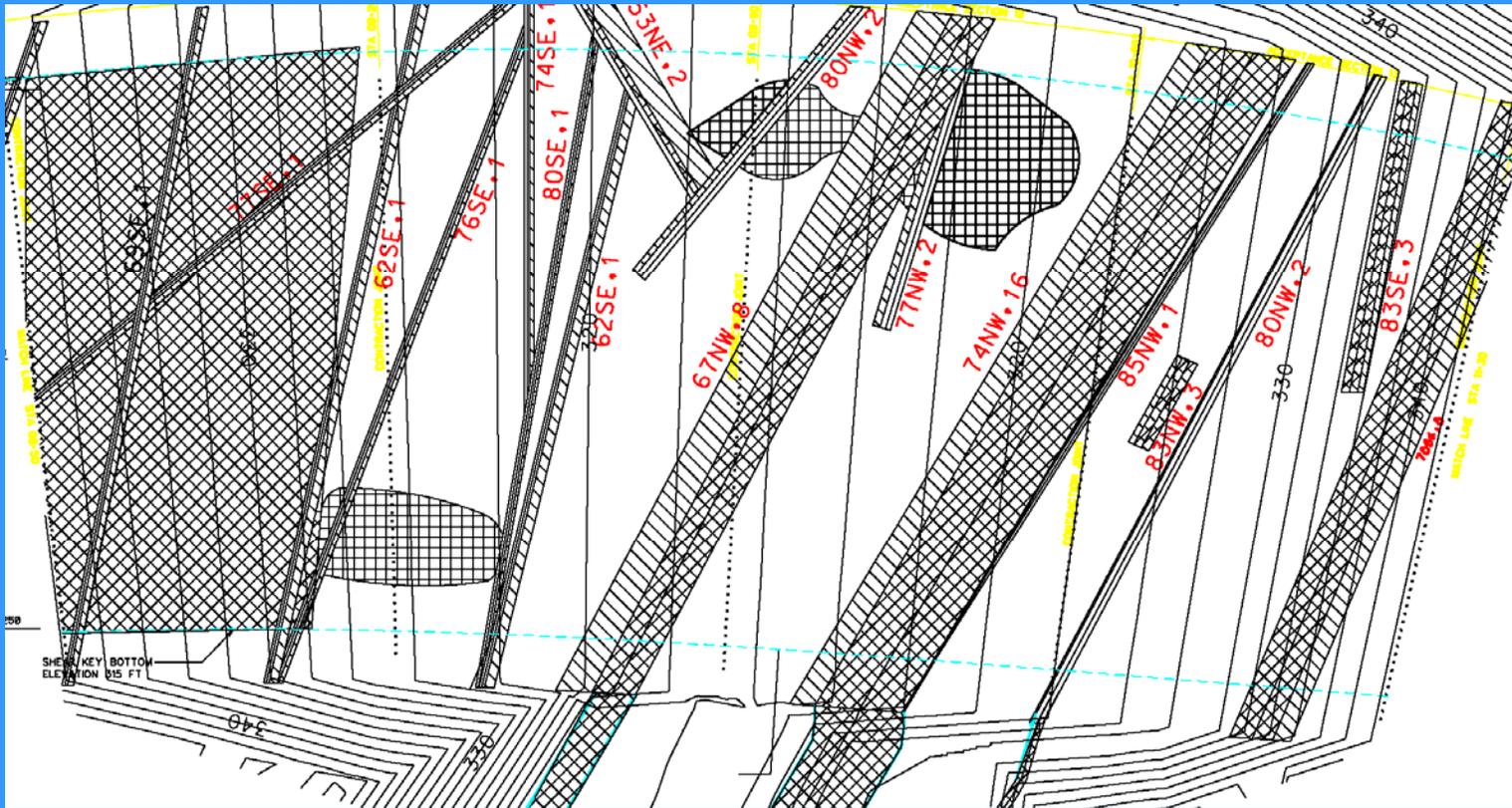


- DOWNSTREAM DISPOSAL AREA
- HAUL ROADS/ACCESS ROAD
- TRANSPORTATION
- GRADING
- COMPACTING

FOUNDATION TREATMENT CONSIDERATIONS

- Foundation Features - Surface and Subsurface
 - Fractures – Surface and Subsurface Treatment
 - Shears - Surface and Subsurface Treatment
 - Weathered zones – Surface Treatment



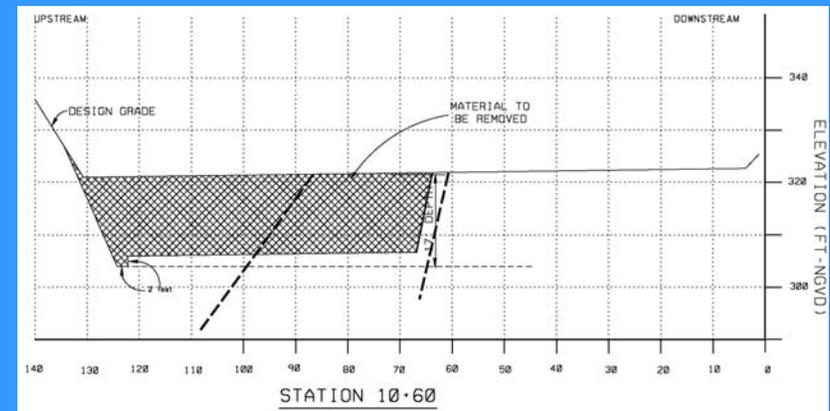


SURFACE FOUNDATION TREATMENTS

Excavations treated with dental concrete

Need rock and weathered material excavation

Clean excavations and place dental concrete



FOUNDATION TREATMENT WEATHERED ZONES



Blocky fracture
pattern -
no weathering



Weathered,
fractured on left and
blocky, slightly
weathered on right

Subsurface Treatment



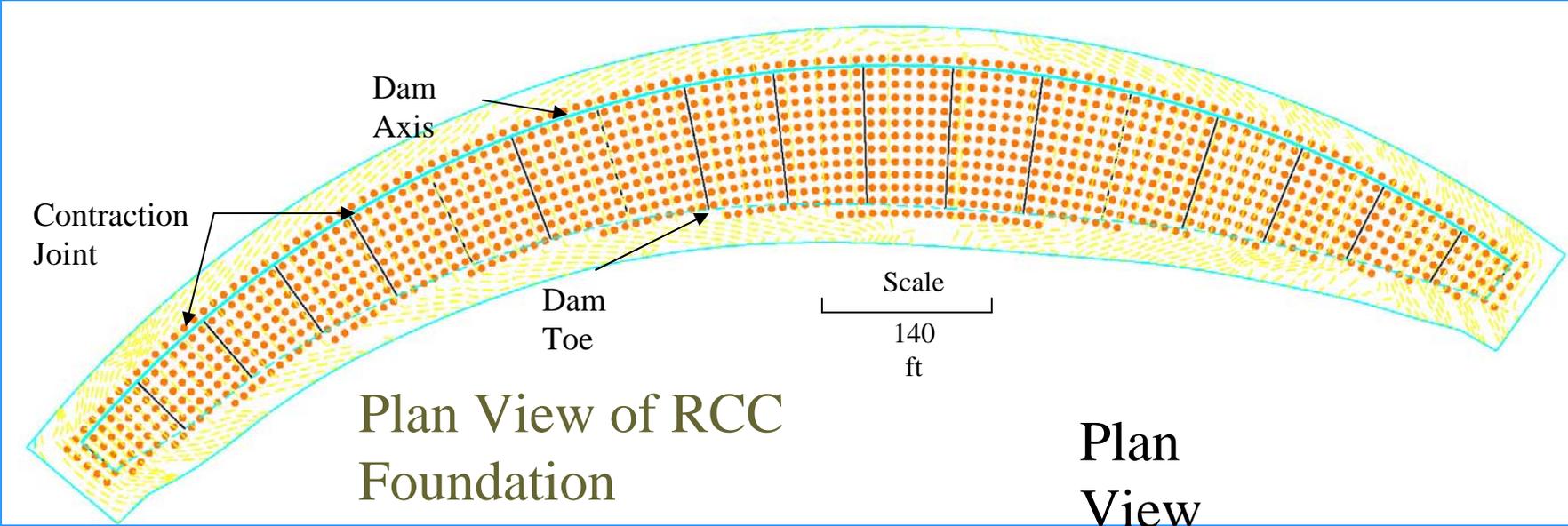
DRILLING and GROUTING

Consolidation Grouting

Contact Grouting

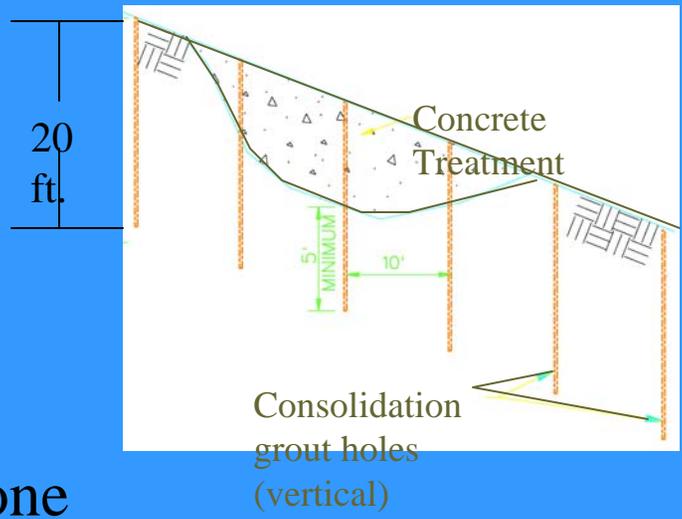
Curtain Grouting

CONSOLIDATION GROUTING



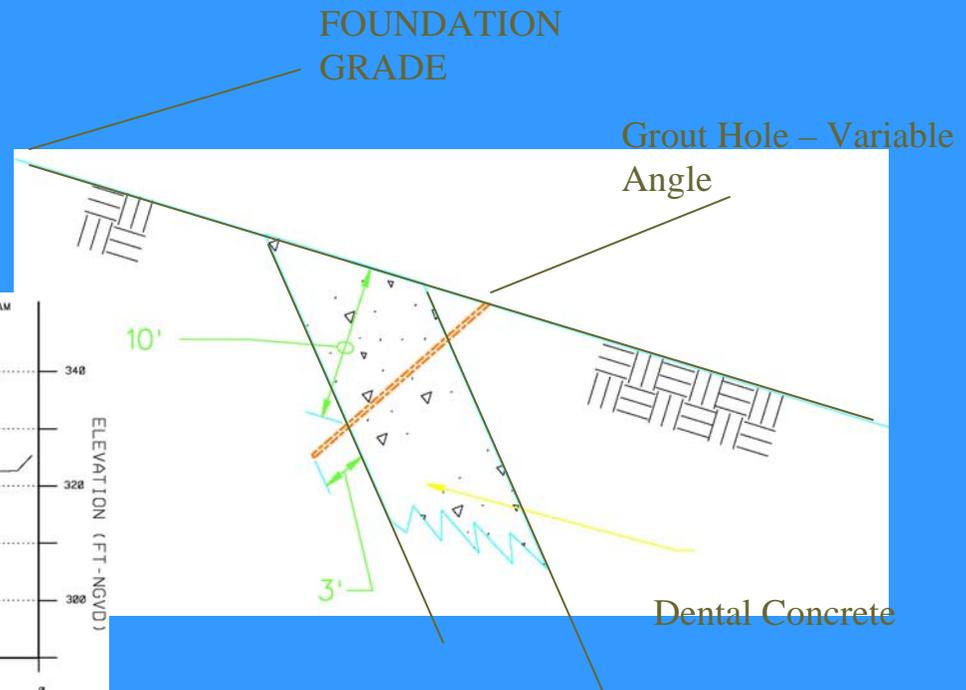
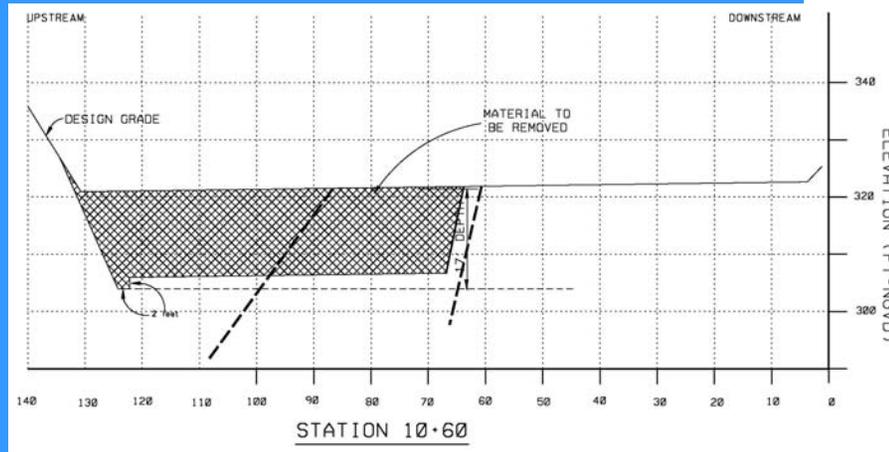
Portland Cement
Grout

DETAIL
Through
Treated Zone

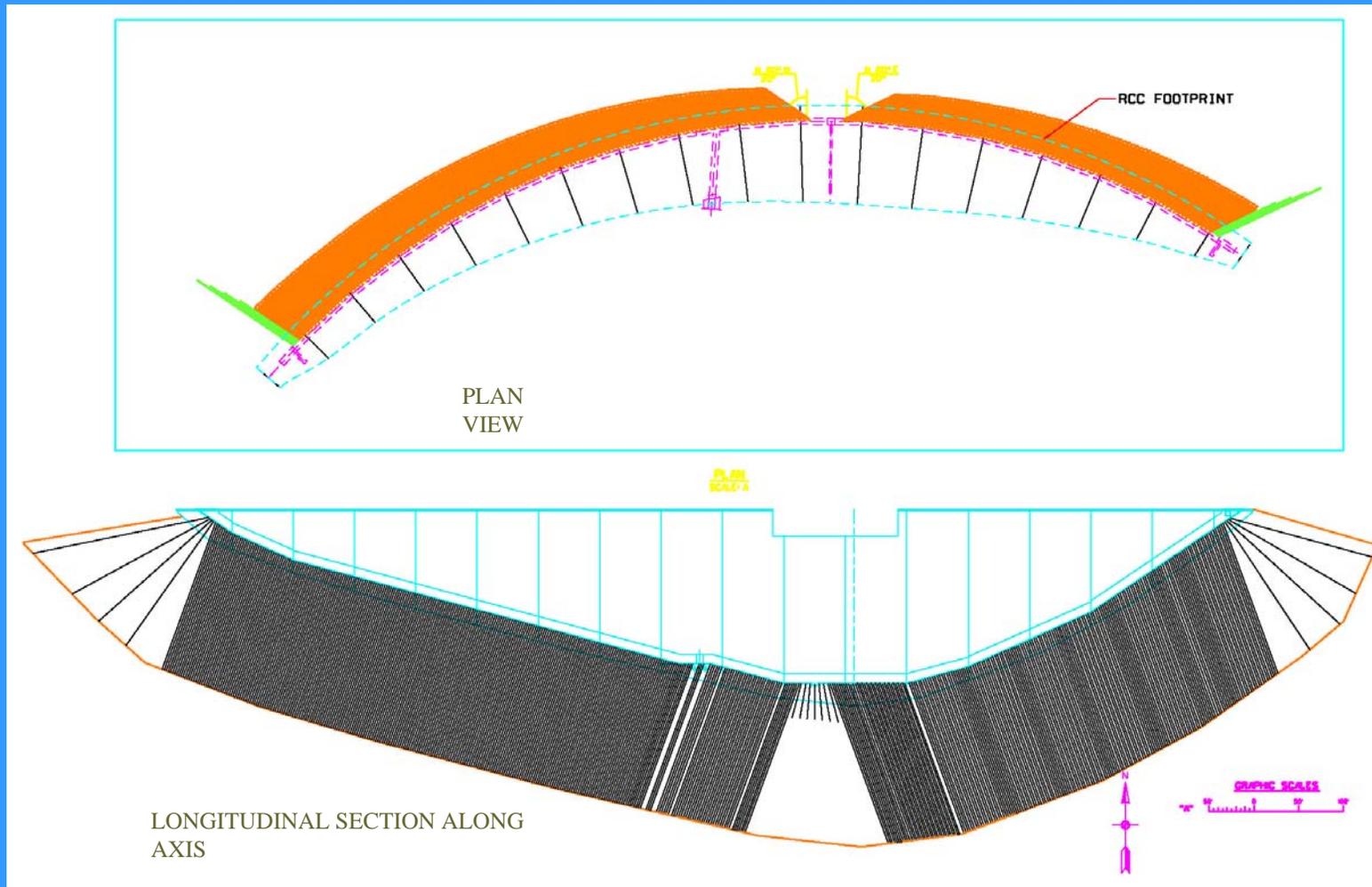


CONTACT GROUTING

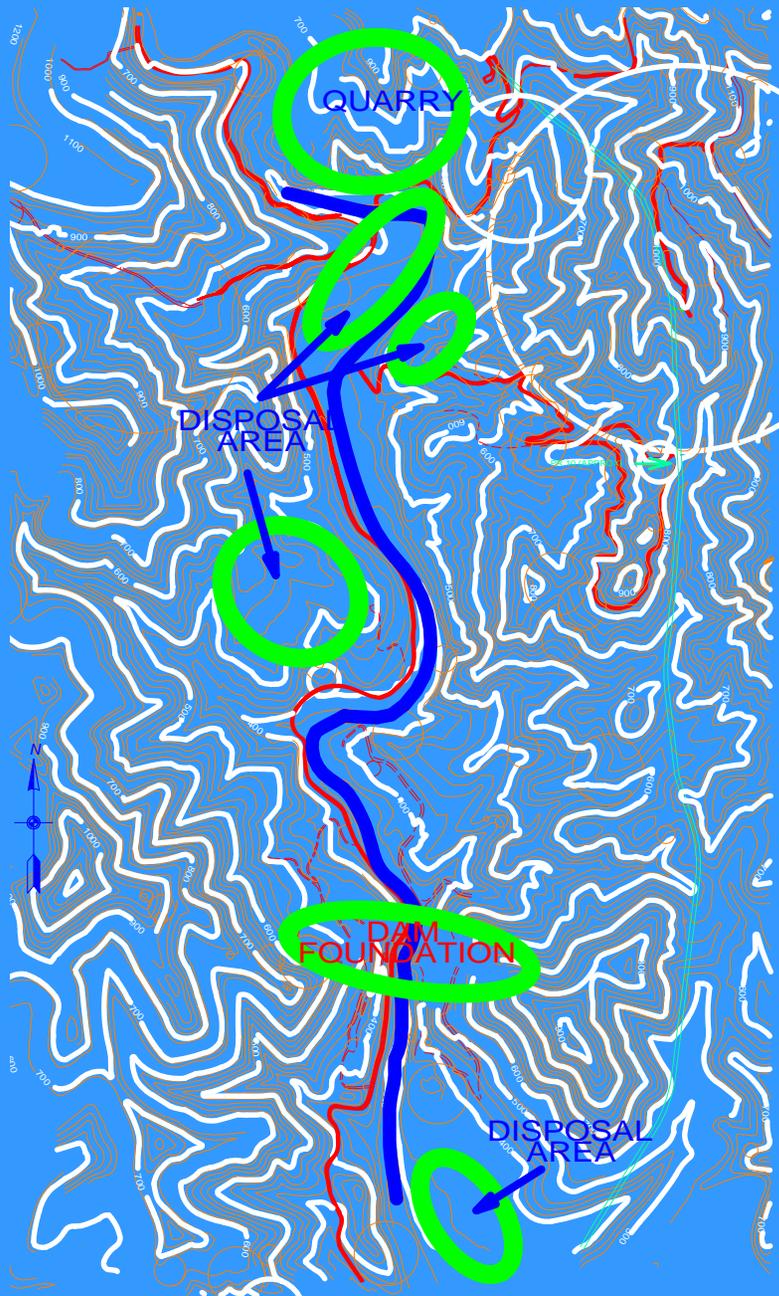
- Stitch grouting of dental concrete



CURTAIN GROUTING



TASKS FROM GALLERY - Curtain Grouting and Foundation Drains



QUARRY OPERATIONS

Clearing and Grubbing of Quarry and Disposal Areas

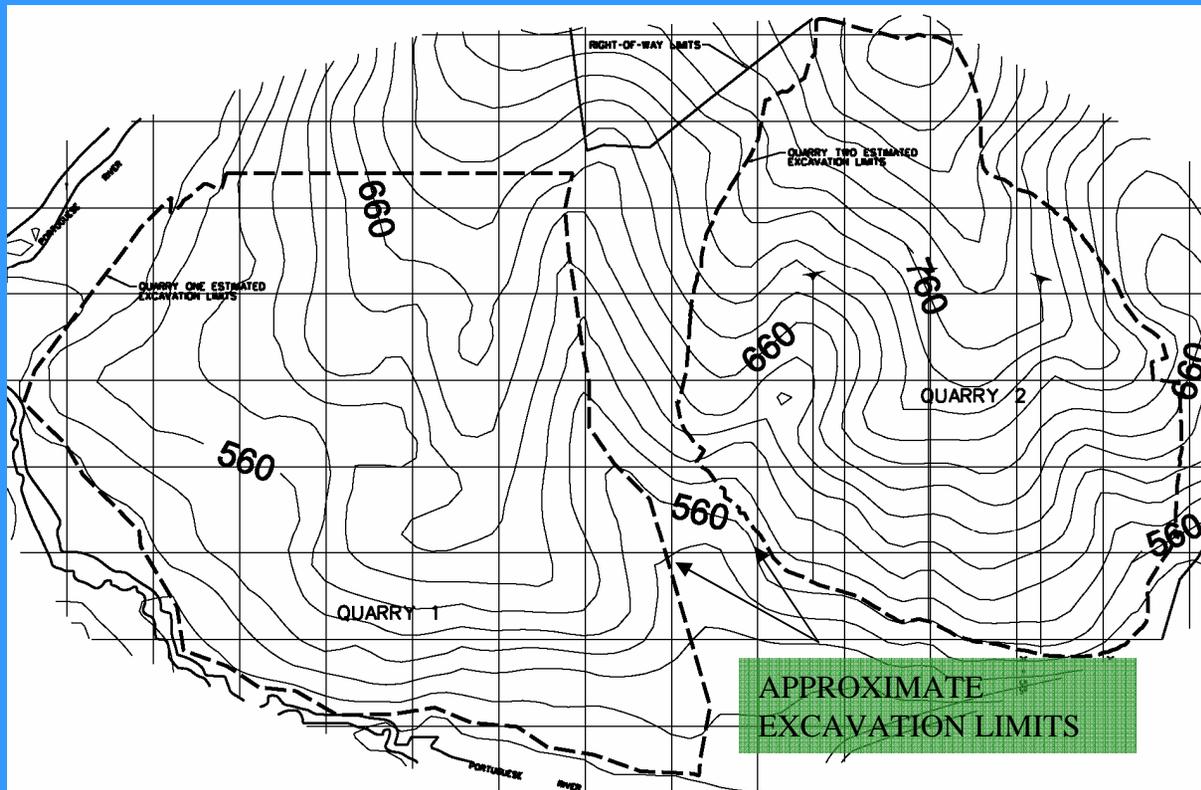
Excavation of Overburden

Quarry Development

Disposal Area Development

Grading and Compaction of Disposal Areas

QUARRY SITE



Overburden averages approximately 30 feet over the area but can exceed 90 feet.

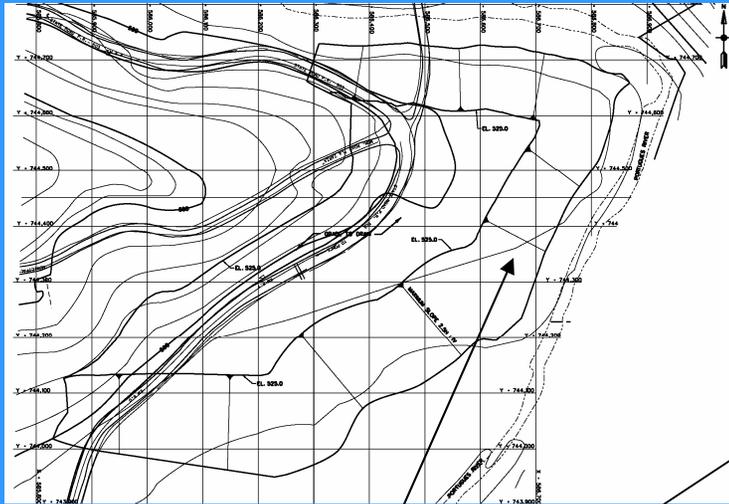
Steep slopes and wooded

Separated from disposal areas by river

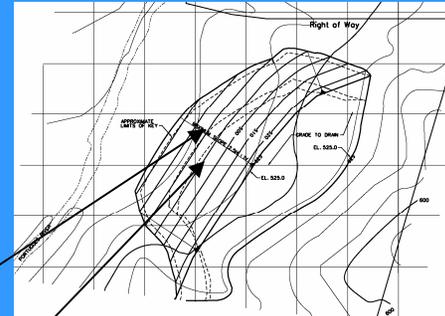
Diorite is the aggregate quality rock

Backfill the quarry to stable slope when exhausted

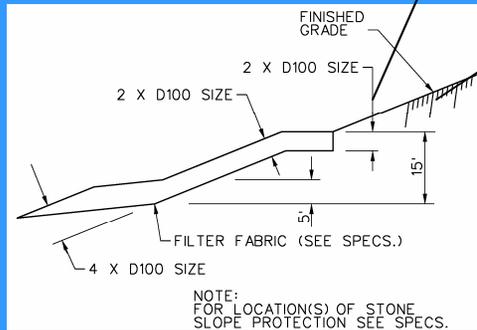
QUARRY DISPOSAL AREA TREATMENTS



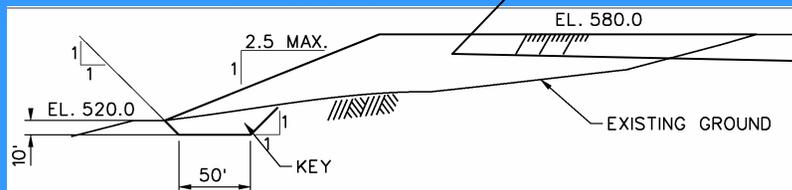
Disposal Area 1



Disposal Area 2



Armor Stone



Embankment Key



Disposal Area 3

THANK YOU

